

Pacific Islands Fishery News

Newsletter of the Western Pacific Regional Fishery Management Council



Winter 1998

MAR 02 RECD

Demand for Pacific Shark Increases

National Marine Fisheries Service
2570 Dole Street
Honolulu, Hawaii

A rapid rise in the amount of sharks landed in Hawaii—from 200,000 pounds estimated whole weight in 1991 to 4.5 million pounds estimated whole weight in 1996—has gained the attention of the Council. The sharks were caught as “incidental,” or non-targeted species, by longliners fishing for tuna and swordfish. Ninety-nine percent of the landed sharks were retained for their fins only. Only 1 percent of the sharks were landed for their flesh.

Some members of the general public, government and fishing industry consider the finning of sharks to be a cruel or wasteful practice.

“Lots of people can use that, so to speak, low-end type of fish,” says Nelson Aberilla, fresh seafood auction buyer for Garden and Valley Isle Seafood. He said demand for shark meat by markets on the U.S. Mainland—where the company ships about 85 percent of its shark—has been increasing.



A tuna vessel with drying shark fins in its rigging is a familiar sight in the Pacific islands. (photo by Sylvia Spalding)

Garret Kitazaki of Diamond Head Seafood Company says he would like to see management measures that would make more shark meat available. During the six months longliners are landing fish in Honolulu, the company purchases about 300 pounds of shark per month. The shark is retailed throughout Hawaii for about \$4/lb and served at Waikiki hotels.

But, according to Sean Martin, co-principal of the gear-and-bait supply company Pacific Ocean Producers and of Vessel Management Associates, which owns five longline vessels, only the flesh of mako and thresher sharks has a market value. The flesh of other sharks that are caught—for example, blue shark and white tips—does not. However, the fins of these sharks are worth up to \$30/lb at Honolulu docks (the average price increased from \$15/lb in 1991 to \$26/lb in 1996). And tradition around the world is to allow crew members to take fins to earn extra money.

The value of shark fins landed annually by Hawaii-based longliners is approximately one million dollars. Several million dollars more of shark fins landed annually in Hawaii are caught outside of the U.S. exclusive economic zone around Hawaii by foreign longliners. These vessels sell their shark-fin catches to U.S. registered vessels with receiving permits that allow them to transport the fins through the EEZ to be landed in Honolulu.

Although there is no evidence that sharks are being harvested beyond sustainable limits in the Council's area of jurisdiction, the Council is closely monitoring the situation.

Records from American Samoa show shark-fin landings in the territory have declined since the mid 1970s and 1980s as the fleet sizes of the foreign longliners home-ported in Pago Pago have progressively reduced and

In This Issue

Demand for Shark Increases	1
Samoa's Longline Fishery	2
Marlin Harvest Reduced	2
PNG Longline Fishery	3
Hawaii's Overfished Bottomfish	4
Longline Closure Questioned	4
Quarterly Planner	4
Council Member Profiles	5
Public Education Needed	5
Damaged Weather Buoy	5
Fish Poison Kit Available	6
Western Pacific Recipe	6

Continued on page 6

ICCAT Reduces Marlin Harvest/Agrees to Other Conservation Measures

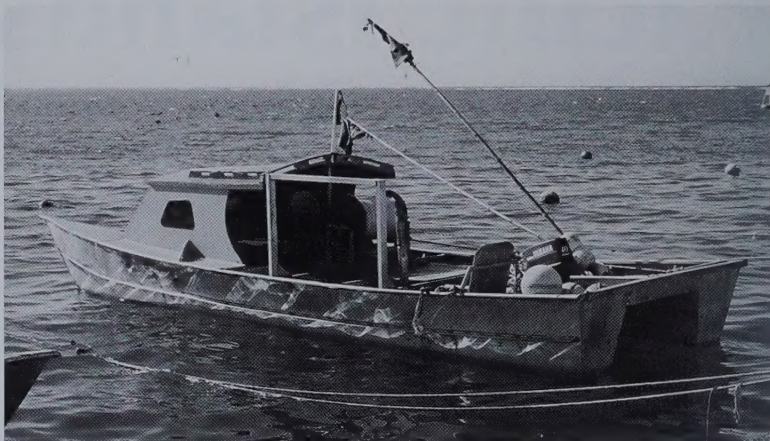
First-ever mandatory conservation measures for Atlantic blue and white marlin were adopted at the annual meeting of the International Commission for the Conservation of Atlantic Tunas, November 14–21, 1997, in Madrid, Spain. Proposed and negotiated by the U.S. delegation, the ICCAT agreement requires countries to reduce landings of these severely overexploited species by at least 25 percent.

ICCAT also adopted a sharing arrangement for south Atlantic swordfish, together with a total allowable catch (TAC) and country quotas for 1998 through 2000, representing the first time quotas have been imposed for this fishery.

South Atlantic albacore catches are also to be curtailed through a TAC to be shared among four countries, with minor fishing countries limiting their catches according to bycatch allowances or a cap relative to recent levels.

Concern over the status of Atlantic bigeye tuna stocks led to several measures, including registration and possible limits in the future on the number of commercial vessels greater than 80 gross tons targeting bigeye tuna and a 35 percent reduction in the catches of Atlantic bigeye tuna by Chinese Taipei.

Also during the meeting, the 25-nation organization adopted a new agreement regarding member nations' compliance with regulations on undersized fish and a package of measures on monitoring and compliance. Included in the package are an ICCAT port inspection program, restrictions on transshipments at sea and a pilot program to implement vessel monitoring systems for high-seas vessels. ICCAT also initiated diplomatic approaches to several nonmember countries whose fishing activities are of concern to ICCAT.



American Samoa's longline fleet consists mainly of *Alia* catamarans.

American Samoa's Longline Fishery Concerns Fishermen

When the 95th Council meeting convenes in American Samoa, April 14–17, the major action item will be management of the American Samoa longline fishery.

According to the recent FAO Expert Consultation on Interactions of Pacific Tuna Fisheries, the number of cases of fisheries interactions in the central and western Pacific is growing rapidly with development and expansion of pelagic fisheries. In most Pacific islands, small-scale artisanal, subsistence and recreational fishing is important for the economic, social and nutritional well-being of a large percentage of the population. Therefore, questions regarding the possible effects of industrial fisheries, both foreign and domestic, on small-boat fisheries are frequently raised.

There are still, however, few scientific analyses to evaluate the practical effects of regulations intended to resolve local pelagic fisheries interaction issues. Nevertheless, various management measures have been implemented in the United States and elsewhere to reduce interactions between pelagic fisheries. For exam-

ple, retention of billfish by U.S. longline vessels fishing off the Atlantic coast is prohibited to protect recreational fisheries. Other management measures have closed parts of the U.S. exclusive economic zone to large scale pelagic fishing. A portion of the U.S. EEZ around Hawaii has been closed to large-scale longline vessels, and longline vessels registered in California are prohibited from fishing in the U.S. EEZ off the West Coast.

Recently, artisanal and recreational fishermen in American Samoa have been increasingly concerned about the possible negative impacts of industrial pelagic fishing in the U.S. EEZ around the territory. This concern has become more acute due to the rapid expansion of the artisanal longline fishery since 1994. Longline catches have risen from zero prior to 1994 to more than 300,000 lbs in 1996. The Western Pacific Regional Fishery Management Council was asked at the 92nd Council Meeting in April 1997 to assist in forming a fishermen's working group to consider various management proposals for the fishery. The Council and American Samoa's Department of Marine and Wildlife

Resources arranged for the working group and other fishermen to meet at various times between June and October 1997.

Local fishermen note that American Samoa's narrow economic base and small private sector have caused high levels of unemployment and severe labor force retention problems. The single largest employer of American Samoans is the territorial government, which is facing mounting debts and a major budget deficit. Developing fish harvesting and marketing capability sufficient to support substantial participation in fisheries will expand and diversify the local economy and help the territory to attain a higher level of economic self-sufficiency.

However, a major concern of the American Samoan fishermen is that larger U.S. longline vessels may seek new fishing opportunities or relocate as fisheries in other areas of the U.S. EEZ collapse or become increasingly restricted. Currently, 32 permits have been issued for the American Samoa fishery by the National Marine Fishery Service's Pacific Islands Area Office, although only a dozen vessels are active on a full time basis. The fishing fleet consists mainly of 28- to 30-foot alia catamarans. The alia catamarans deploy 200–300 hooks from a hand powered reel and harvest mainly albacore tuna, which are sold to the local canneries. Another large fleet of alia longliners, which similarly targets albacore, is based in nearby Western Samoa.

The preferred management option to prevent any interaction problems would be to establish a closed area around the islands of the territory in which only pelagic fishing vessels smaller than 50 feet in length would be permitted to fish. There is a general consensus in American Samoa that, at some point, limited entry to the small-boat fishery may also be required to prevent over-capitalization.

PNG's Emergent Longline Fishery

Papua New Guinea is one of the largest Pacific nations with one of the most extensive exclusive economic zones (EEZs) in the region. Like the rest of the Pacific, PNG is keen to expand its longline fishing industry for the lucrative fresh tuna market in Japan.

Fishing trials in 1994 and 1995 in Rabaul, Finchaven and the capital city, Port Moresby, demonstrated the feasibility of a domestic fishery, although the productivity of the resource was evident from the long history of fishing in PNG waters by Korean, Taiwanese and Japanese longliners. From 1994 onward, local companies began to establish fishing operations at ports throughout the country. A longline management plan, developed by the National Fisheries Authority in 1995, included a ban on foreign longliners operating in the PNG EEZ. Licensing guidelines included a minimum 51 percent PNG equity in joint ventures and short-term charter of foreign vessels to PNG companies on a 1:1 basis with the number of local vessels in a company fleet.

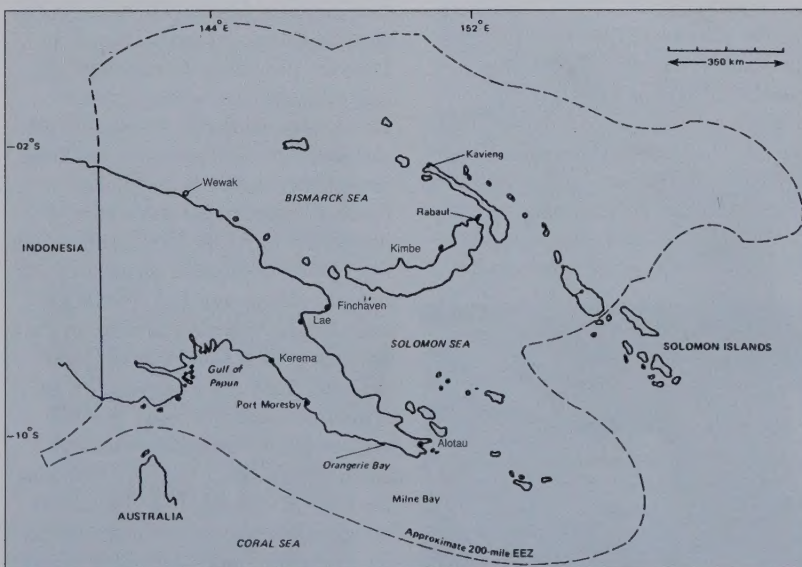
Twenty longliners currently operate in PNG, including two chartered vessels that normally fish the Northwestern Hawaiian Islands. All of the fishing companies are based in Port Moresby, except one in Alotau and two in PNG's second city, Lae. The Alotau company, with four vessels, has tried but not yet succeeded in marketing

fish to Japan via Australia. The Lae companies, with a boat apiece, supply fish to domestic markets.

Vessels based in Port Moresby fish along the south Papuan coast from Kerema to Milne Bay. Average catch rates are 700–1,102 lbs/1,000 hooks, with sets averaging about 1,200 hooks. The catch composition is about 40–45 percent albacore, 40–45 yellowfin tuna and 10–15 percent bigeye tuna. The bigeye and yellowfin tuna are marketed mainly in Japan, where they are considered to be low in fat with poorly colored flesh. Not greatly esteemed, they command about 800¥/kg. PNG albacore is valued even less—at 150–350 ¥/kg, freight costs would not even be covered.

Fishing vessels are concentrated at Port Moresby because it has the only international airport with a runway long enough to accommodate large passenger aircraft with substantial freight capacity. The largest aircraft flying PNG domestic routes can typically accommodate only five sashimi-grade tunas packed in boxes. Costs for domestic freight are similar to those for export freight. Until the freight situation changes, productive longline fishing grounds north of Port Moresby in the Bismarck and Solomon Seas will likely remain unexploited.

Logistical problems and freight costs have led to failed longline ventures in Wewak, Lae, Kimbe, Rabaul, Kavieng and Port Moresby. Other constraints to the fishery include high operating costs (especially for fuel), problems obtaining water and ice,



Papua New Guinea showing major fishing areas

limited wharf space and lack of skilled personnel. Further, the south Papuan coastal area is subject to strong southeasterly trade winds for about nine months of the year, making fishing difficult, and may be brushed by cyclones, which pass through the Solomon Islands. Marketing fish in Japan will continue to be the major constraint and may require dedicated freight aircraft to move fish from provincial towns to the capital.

For more information about the PNG longline fishery, contact Maurice Brownjohn, chairman, PNG Fishing Industry Association, at The Net Shop, P.O. Box 5860 Boroko, NCD, PNG; fax (675) 325-8994; or e-mail netshop1@daltron.com.pg.



Council to Report on Hawaii's Overfished Bottomfish

By September of this year, the Western Pacific Regional Fishery Management Council must prepare an amendment to its Bottomfish Fishery Management Plan to restore onaga (*Etelis coruscans*) and ehu (*Etelis carbunculus*) stocks in the main Hawaiian Islands (MHI) to healthy levels. For the past seven years, the two bottomfish species have been recruitment overfished in the MHI as indicated by their spawning potential ratios (SPR) being below levels necessary to sustain the fisheries. SPR is basically the percent of reproductively mature females in the population compared to the number expected in a fishery in its pristine condition. For most species, an SPR below 20 percent indicates recurrent overfishing. The SPR for MHI onaga is currently 5 percent; for MHI ehu, it is 8 percent.

The Council began working with the Hawaii Institute of Marine Biology (HIMB) in November 1997 to determine whether the MHI bottomfish are genetically distinct from those in the Northwestern Hawaiian Islands (NWHI). If genetic differ-

ences do not exist then the stocks of these species may extend throughout the entire archipelago. The MHI populations would be locally depleted, but the stocks themselves would not be overfished. If such a situation exists, the Council would suggest to the Secretary of Commerce that no immediate federal action is necessary, even though state action may be beneficial to improve local resources.

If archipelago-bottomwide stocks cannot be demonstrated, then three federal options are being considered by the Council.

First, because 80 percent of MHI onaga and ehu occur within state waters (3 miles from shore), the Council's preference would be to submit the administrative rule on MHI bottomfish management that is being formulated by the State of Hawaii's Division of Aquatic Resources (DAR), as long as the rule appears to be effective. The draft administrative rule includes closures of certain areas around the state to bottomfishing, gear restrictions, identification of vessels and establishment of a control date, which would warn fishermen that a limited entry program could be implemented in the future. The DAR anticipates submitting a completed draft of its rule to the state Board of Land and Natural Resources for approval in early 1998.

Second, if the state plan is determined to be generally effective but weak in some areas, the Council could implement a plan that would complement the state's plan. For example, the Council could provide federal enforcement assistance through the U.S. Coast Guard and the National Marine Fisheries Service. It might also complement the state's closed areas with additional closures in federal waters.

Third, if the state plan is not finalized in time for the Council's September deadline or if the state plan appears to be weak, the Council could implement an independent plan for closed areas and/or season or other restrictions on fishing for onaga and ehu in the MHI.

Hawaii's Longline Closure Area Questioned

During the public comment session of the 94th Council meeting held November 1997, Big Island gamefishing tournament organizer Capt. Jody Bright voiced concerns about the putative effects of the longline fishery on the Hawaii charter-boat industry. He said the economic returns generated by blue marlin caught by longlining were small compared to those caught by charter boat fishing. He also cited studies conducted on the U.S. Mainland that suggest a longline presence has a negative influence on gamefishing enthusiasts, who may choose to fish elsewhere. Bright suggested reducing the amount of blue marlin taken in the Hawaii longline fishery by extending part of the present 50-75 nmi longline closed area off the Kona coast of the Big Island to about 150 nmi. He presented information to suggest that this area

Continued on page 5

Quarterly Planner

Upcoming Council Events and Meetings

March

- 5** Bottomfish Task Force
1164 Bishop St, Suite 1400
Honolulu, Hawaii
- 11-13** Bottomfish Plan Team Meeting
1164 Bishop St, Suite 1400
Honolulu, Hawaii
- 17-19** Crustacean Plan Team Meeting
1164 Bishop St, Suite 1400
Honolulu, Hawaii
- 24-26** 68th Scientific & Statistical Committee Meeting
1164 Bishop St, Suite 1400
Honolulu, Hawaii

April

- 9** FDCC Meeting
1164 Bishop St, Suite 1400
Honolulu, Hawaii
- 14-16** 95th Council Meeting
Rainmaker Hotel
Pago Pago, American Samoa

May

- 6-7** Pelagic Plan Team Meeting
1164 Bishop St, Suite 1400
Honolulu, Hawaii

Closure Questioned *continued from page 4.*

produces about one quarter of all blue marlin taken by longline fishing.

Not surprisingly, Bright's assertions generated much comment from other sectors of the fishing industry. Brooks Takanaka of United Fishing Agency said blue marlin was a cheap popular food fish in Hawaii, particularly for social events and important for various processed products, such as poke, jerky, smoked marlin and spreads. The price of blue marlin was bound to increase if the level of catch declined appreciably through the measures suggested by Bright. This would inevitably create difficulties for processors and consumers. These sentiments were echoed by others involved in the fish processing industry. Some longline operators also expressed concern about the present longline closed area around the main Hawaiian Islands (MHI). They suggested allowing longliners to fish within the present MHI 50–75 nmi closed zone on weekdays, leaving it on weekends when the majority of recreational fishers are active.

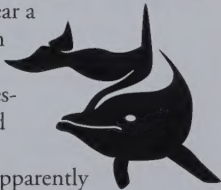
Following these public comments, the Council directed its staff to review the information presented, determine the magnitude of the problem and suggest if any management action is required.

Public Education Still Needed to Protect Species

In August 1997, two persons on the Big Island of Hawaii were arrested for capturing and butchering five green sea turtles. Also on the island that month, approximately one dozen dead dolphins were reportedly seen offshore near a south Kona Fish Aggregating Device. An investigation revealed that the marine mammals had apparently been shot.

These incidents underscore the need for continued efforts to educate the public about the laws that protect marine mammals and endangered marine species and the fines and penalties for violating those laws.

Dolphins are protected under the Marine Mammal Protection Act of



1972, which restricts the taking, possession, transportation, selling, offering for sale and importing of marine mammals. "Taking" includes "to harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect, or kill any marine mammal."

Green sea turtles are protected under regulations that prohibit the importing or exporting, possession, selling, delivering, carrying, transporting or shipping, by any means whatsoever, of any endangered wildlife except by employees of state and federal agencies in the course of their official duties or by persons defending their own lives or the lives of others.

Killing a sea turtle can get a person a civil penalty of up to \$27,500 per turtle and a criminal penalty of up to one year in jail and a \$50,000 fine. Killing a dolphin can get a person a civil penalty of up to \$11,000 per dolphin and a criminal penalty of up to one year in jail and a \$20,000 penalty. The intentional lethal taking of dolphins and turtles is generally referred for criminal prosecution.

Damaged Buoy Hampers Weather Forecasting

In late 1997, a weather buoy anchored 193 nautical miles northwest of the Hawaiian island of Kauai was damaged, apparently by vandalism and inappropriate activities by unknown vessels. Several costly trips were necessary to replace and repair the buoy.

The buoy collects data as part of the National Oceanic and Atmospheric Administration's weather forecasting system. Its proper functioning is important for maintaining the safety and property of mariners. To safeguard the system from further damage, the following steps are being requested:

- Do not board or tie up to a data buoy;
- Give data buoys a wide berth (500 yards for vessels trailing or trolling gear; at least 20 yards for all others);
- Report to the U.S. Coast Guard any observation of damage to, persons on or vessels attached to a data buoy.

The U.S. Coast Guard in Honolulu may be reached at (808) 541-2315 or (808) 541-2900.

American Samoa Council Members Profiles

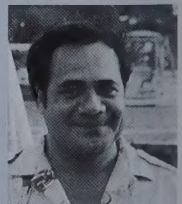
Paul Stevenson, the Council chairman in 1992 and a vice chair 1996–1997, is manager of the fishing company PRI–South Pacific Resources. A native American Samoan, he holds a doctorate degree in education and a master of arts degree in biological science. He has been involved with American Samoa's educational system for much of his career.



Aitofele Toese Sunia joined the Council in 1997. A legislative counsel and a part-time fisherman and cabinetmaker, he holds a Juris Doctor as well as undergraduate degrees in business and in government. He is a member of both the Hawaii and American Samoa Bar Associations and is vice chairman of the territory's School-to-Work program.



Ray Tulafono, director of American Samoa's Department of Marine and Wildlife Resources, was on the Council for several years in the past and was reappointed as a member in 1997. A lifelong recreational and subsistence fisherman, he has a master's degree in analytical chemistry and previously worked in the tuna canneries as a chemist and a quality-control manager.



Fish Poison Test Kit Now Available

Cigua-Check, the only commercially available test for detecting ciguatera poison in fish, is now available to the general public. A package of five tests is priced at US\$20 per package plus shipping and handling charges. The test is also available at fishing, drug and sports stores throughout Hawaii.

Humans become afflicted with ciguatera by eating near-shore tropical fish that contain ciguatoxin. The test determines whether a fish's flesh contains the toxin.

A grain-sized piece of the fish's muscle is placed in a vial of liquid methanol. A test

strip is added, air dried and placed in a second vial containing a purple liquid. If the strip remains purple after being rinsed, the meat contains ciguatoxin and should not be eaten.

Symptoms of ciguatera fish poisoning in humans include weakness, diarrhea, muscle pain, joint aches, numbness and tingling, temperature reversals (cold feels hot and vice versa), nausea, chills, itching, headaches, sweating and dizziness. Although the disease rarely causes death, symptoms can last for several months and, for sensitive persons, can reoccur even if no additional ciguatoxic fish are eaten.

For more information or to order the test, contact Oceanit Test Systems, 1100 Alakea St., 31st floor, Honolulu, HI 96813, USA; phone (808) 539-2345; or visit the company's Web site (www.cigua.com).

Cigua-CheckTM
Fish Poison Test Kit



Demand for Shark *continued from page 1.*

fishing methods have changed. However, total landings for 1996 by both domestic and foreign vessels (longline and purse seine) is estimated to be as high as 88,000 lbs with a total value of \$1 million. Prices for fins range from \$3/lb to \$32/lb.

As a major port for tuna transshipment in the Pacific, Guam is believed to land substantial quantities of shark fin. However, in the neighboring Northern Mariana Islands there is thought to have minimal shark-finning activity as little transshipment of tuna is taking place because of the departure of the tuna fleet from Tinian.

The Council addresses oceanic sharks in its Pelagic Fishery

Management Plan, which defines overfishing for pelagic sharks as decrease in the spawning potential ratio below 35 percent. The Pelagic FMP also requires the keeping of log-books of all species caught—including the number of sharks finned or discarded. The Council has requested that National Marine Fisheries Service and the Pelagic Fisheries Research Program provide it with biological and other fishery information on Pacific blue sharks so the species' susceptibility to overfishing due to long-line catches can be assessed. The Council contracted a consultant to document all Pacific data holdings on blue and other sharks; the project was completed last year. It is working to estimate the volume and value of the fins being landed and transshipped through Guam. It is working on an economic feasibility study that will review options for incidental shark catch utilization in hopes of reducing the level of wastage. It is also considering supporting a state or territorial fee or tax on shark fins landed in the U.S. Pacific islands.



A bundle of dried shark fins.

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Shark Matelote

If you catch a small shark, consider this recipe for shark stew, which appears in *Fishes of Polynesia*, by Raymond Bagnis et al.

a small shark or several shark fillets

parsley	oil
onion	thyme
white wine	bay leaves
shallot or onion	red wine
garlic clove	flour
butter	salt and pepper

Skin and remove the red muscles from a small shark. Cut fillets of white meat from the back, and then wash them thoroughly under a running tap to remove the ammonia-like smell.

Make a stock by simmering some finely chopped parsley and onion in a little white wine and water for 15 minutes, and then strain.

In a frying pan, brown a chopped shallot or onion and a clove of garlic in a mixture of butter and oil. Add the fillets, stock, thyme, a few bay leaves and a little red wine.

Watch the fillets carefully as shark meat tends to flake apart when overcooked. Remove the fish when it seems properly cooked, and thicken the sauce with some butter and flour to a consistency that will stick to the back of a spoon. Salt sparingly and pepper. Arrange the fillets on a serving dish, cover them with the sauce and sprinkle with chopped parsley. Serve with fried croutons and boiled potatoes.